Digital Democracy

Digital Cooperation –
An Opportunity to Advance
Sustainable Development

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In today's complex digital world, we see enormous advantages of digital technologies, which will play an increasingly important role in sustainable development in the coming years. Of course, we are also experiencing risks and challenges in the rapid development of these technologies. These challenges can no longer be met by individual organisations or countries. Instead, the answer to these challenges depends on cooperation between different groups, sectors, stakeholders, and countries.

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The Digital Age We Live In

Fifty years to the day since the first internet transmission was made, the world has experienced exponential transformation, driven by the evolution of the information and communication technologies (ICTs) in all aspects of our lives. ICTs have had a revolutionizing impact on our economies and societies, and further disruptive innovations and changes are expected in the near future. Greater levels of digitalization will create new ways and means for tackling global development, with major implications for the United Nations' 2030 Agenda on Sustainable Development.

Technological developments are unfolding at a speed without parallel in human history. The increasing pace of change can be illustrated by the fact that it took about 50 years for the telephone to connect the first 50 million users, but it has taken only seven years to reach the same number of internet subscriptions, and just three years for a social media platform to reach its first 50 million users.[1] Today, there are more mobile cellular subscriptions worldwide than inhabitants on the planet, and 4.1 billion people use the internet.[2]

The potential of the internet will be at its greatest if we are able to cultivate it as a global resource or public good that is open, inclusive, reliable, robust, secure, and trustworthy. Through its evolution, the internet has become an integral part of our lives and has played a critical role in delivering social, economic, and environmentally sustainable progress. In today's world where we expect to be connected everywhere and at all times, and where we talk about artificial intelligence, bio technology, material science, and robotics, it is incredible how much progress has been made and how much more can be done for the advancement of human welfare.

However, while the ICTs are shaping history and evolving alongside us, these same technologies have also exposed us to new types of threats, risks, and governance challenges. Capabilities to commit cybercrime or cyberattacks are developing at a tremendous rate, becoming more targeted, having a higher impact on physical systems, and undermining societal trust in ever more insidious manners. There is also a risk that the misuse and abuse of digital technologies will result in mounting inequality, as well as threatening a broad range of human rights. In addition, there are ever-growing concerns about the ethical and social implications of emerging technologies. We are thus increasingly feeling the pressure to develop effective and innovative governance models for new science and technologies.

All these challenges are transnational and also trans-institutional in nature, thus no single government or institution can address the challenges ahead alone. They can be addressed only through international cooperation, which requires a robust process of digital cooperation across governments, private sector, particularly technology companies, research institutions, academia, civil society, and international organizations.

To further develop this perspective, this article is structured into two parts: Firstly, "The Digital Society we shape", which is composed of three specific themes – digital inclusion, digital capacity and digital governance; and, secondly, "The Digital Interdependence we respect", outlining the five thematic recommendations from the High Level Panel on Digital Cooperation, as well as the United Nations' ongoing efforts to follow-up on these. This article will be then concluded in a section on "Enhancing Digital Cooperation towards Sustainable Development".

The Digital Society We Shape

Digital Inclusion

New data released in 2019 shows that internet use continues to grow globally – on average by 10 per cent every year between 2005 and 2009, with 4.1 billion people now using the internet, or 53.6 per cent of the global population.[3] However, an estimated 3.6 billion individuals still remain offline and have no access to the wealth of knowledge available through the internet. This situation is more extreme in the world's Least Developed Countries, where more than 80 per cent of the population is not connected. The digital divide also persists within countries; for example, men, urban residents, and young people are more likely to be online than women, rural residents, and older people, further exacerbating inequality in societies.

Given that the internet has become an indispensable tool in our daily lives, it is therefore even more important to redouble our efforts to get the whole world connected, and to create an enabling environment for industry to make the necessary investments in infrastructure, applications, and services. To build an inclusive digital society, technological solutions will be crucial, but will not be enough. This task also requires sustained and coherent efforts from many stakeholders across all areas. In this way, expanding access to digital infrastructure, combined with enabling policy and regulatory environments, will allow businesses and stakeholders to participate in the digital economy, and countries

to increase their overall socio-economic well-being and competitiveness.

> **Connecting the unconnected all over the globe requires a mix of technological and regulatory initiatives.**
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There are many initiatives that support efforts to connect the unconnected. One good practical example is using new technologies in space and upper-atmosphere communication, such as high-throughput satellites (HTS),[4] massive non-geostationary orbits (NGSO) satellite constellation,[5] and high-altitude platform stations (HAPS)[6]. Again, connecting everyone requires a mix of technological and regulatory solutions. While the ubiquity, reliability, and improved capability of these technologies will help expand connections to rural and remote areas, supporting regulatory frameworks such as the additional radio-frequency bands for HAPS approved at the World Radiocommunication Conference (WRC-19)[7], will also need to be updated in line with these technological developments.

Digital Capacity

The world has already entered a digital age where new opportunities and challenges are emerging every day. ICTs are empowering people, especially those in disadvantaged and marginalized groups, with information and knowledge, and act as a catalyst in ensuring their rights within the comity of digital societies. In this increasingly connected world, we are not only the beneficiaries of, but also the driving force behind, the latest innovations and practices. This call for new knowledge, new know-how, and new skills gives those who have the ability to learn and adapt fast a better chance to gain a competitive advantage over others.

Digital capacity is important at every level, be it institutional, regional, or national, as ICTs are

crosscutting and a critical enabler for growth and development. Bringing low-income countries into the digital economy will accelerate local innovation and research. Emerging technologies, such as AI, Internet of Things (IoTs), 5G, and sophisticated mobile technologies, can further boost employment and business opportunities, and improve the delivery of public services, from education to health clinics to garbage collection. For example, Africa is embracing technological change and leapfrogging ICT development, fuelled by mobile broadband, and enabling access to critical information and services. Much of the progress is driven by digitization and e-commerce. The digitalization of finance, such as M-Pesa[8], is making it possible to provide low-income and rural populations with access to services at an unprecedented scale. This progress has also triggered efforts on the African continent to achieve greater heights in other sectors, such as education, health, transportation, and agriculture.

> **Digital literacy training needs to accompany technology provision in order to mitigate the unequal distribution of knowledge and expertise.**
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However, the lack of digital skills is a significant impediment for people to become connected, and connectivity gaps are further exacerbated by unequal distributions of knowledge and expertise. Even in areas where getting online is possible and affordable, extra efforts are still needed to empower people who may be discriminated against and excluded. In order to achieve this critical objective, e-strategies at the national, regional and international levels must address the special requirements of people so as to ensure their full inclusion in the digital societies. For example, investment in infrastructure for affordable access and the provision of digital literacy training could be a solid two-pronged approach to connect the unconnected.

Within the UN system, we have a potentially game-changing connectivity project, called "Gavi for Gigabytes" or shortly "GIGA", which is being led by UNICEF and the International Telecommunication Union (ITU).[9] It aims to connect every school to the internet, and especially every young person to the information, opportunities, and choices created by digital technologies. Specifically, GIGA will build on the model of the Global Alliance for Vaccines and Immunization (GAVI) of common bidding with the private sector to map and then connect every school in the world to the internet by 2030. It is expected to connect young people who are excluded from the digital society by poverty, geography, lack of skills, or other disadvantaged circumstances. It is an ambitious project which will require sustainable and coherent efforts from many stakeholders.

Digital Governance

Digital technologies have enhanced democratic participation in public life, facilitated globalized communication networks, and helped spread the availability of information for development and many other purposes. Through e-government, for example, state institutions around the world can be more efficient, provide better services, properly respond to the demands of citizens for transparency and accountability, and be more inclusive. The new generation of digital technologies, in the form of IoTs and AI, along with sophisticated mobile technologies, will enable even greater opportunities to improve the quality of people's lives, and will bring more transformative shifts in how our economies and societies function.

However, digital technologies have been largely developed in an environment of minimal to no governance, because governance or regulation of the digital domain has often been framed as a threat to innovation. Yet, in an ever more digitalized world, these technologies have also brought about new threats. We are ever more concerned about cybersecurity, with new types of threats and vulnerabilities of ICT infrastructure, systems, and software, as well as dangers

posed to – and by – the vast amounts of data we harvest. Beyond cybersecurity, we also need to address human rights standards and global safeguards in emerging technologies, such as AI, autonomous weapons, biometric sensors, to name but a few. The ethical and legal implications of these technologies are in particular increasingly discussed, especially around the issues of privacy, accountability, and data protection.

In some cases, where international norms or regulations are absent, we have seen the private sector adopting its own guidelines, self-regulation, or non-statutory rules[10] based on business expertise and advanced knowledge. With this model, however, there is less accountability than when regulation is delivered by government authorities or elected public officials. Therefore, the private sector is slowly changing its attitude from 'regulation constrains innovation' to a desire for 'fast, adoptable and smart regulation'. Many countries have also started to develop national digital regulatory and policy frameworks on emerging technologies.[11] Both private and public sectors should work together to bridge the absence of regulation, and to develop effective and innovative governance models.

From the experience of the World Summit on the Information Society,[12] we have learnt that when we consider governance of new technologies, we must also consider the indirectly related public policy issues, which are of great significance, including wider legal, economic, developmental, and socio-cultural aspects. In order to better protect public safety, for example, we also need complementary national, regional, and international principles and guidelines. Within the United Nations system, many important initiatives, fora, and discussions are under way, which include, inter alia, the Group of Government Experts (GGE), the Open-Ended Working Group (OEWG), the UN General Assembly Plenary, the Multi-stakeholder Forum on Science, Technology and Innovation (STI Forum), the Commission on Science and Technology for Development (CSTD), the World Summit on the Information Society (WSIS) Forum.
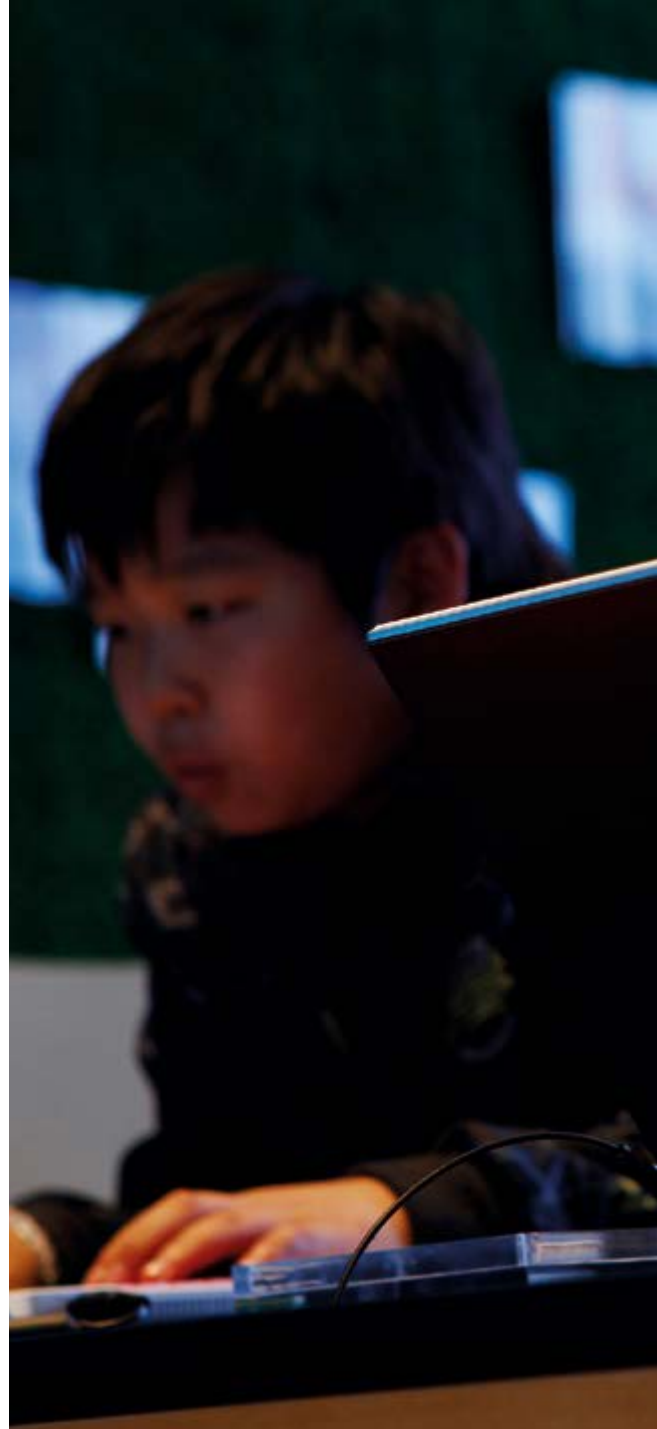
In addition, in 2018, the UN Secretary-General initiated a key milestone in this era of digital transformation – convening a High-Level Panel on Digital Cooperation[13] to advance global dialogue on how we can work together to realize

Inclusion in digital societies: Investment in infrastructure for affordable access and the provision of digital literacy training should be a solid two-pronged approach to connect the unconnected. Source: © Bobby Yip, Reuters.

the potential of digital technologies for advancing human well-being, while mitigating their risks. This is the first-ever panel of the UN Secretary-General which is chaired solely by private sector figures. It has resulted in experts' recommendations to strengthen our joint effort to build digital cooperation for sustainable development. Further details about the activities of the High Level Panel on Digital Cooperation will be provided in the following section.

The Digital Interdependence We Respect

The High Level Panel's Recommendations

In June 2019, in its report, entitled "The Age of Digital Interdependence", the UN Secretary-General's High Level Panel on Digital Cooperation set out to help answer some of the biggest questions on digital transformation.[14] The Panel outlined the following five thematic recommendations, which emphasise the need to close the digital gap, grow human and institutional capacity, recognise human rights in digital contexts, build trust, security and stability in cyberspace, and agree on a new global architecture for digital cooperation.[15]

1. Build an Inclusive Digital Economy and Society

"[1A] We recommend that by 2030, every adult should have affordable access to digital networks, as well as digitally-enabled financial and health services, as a means to make a substantial contribution to achieving the SDGs."

The Panel stressed everyone, including those with disabilities, must have access to the internet by 2030 and that the internet provided must be stable, affordable, fast, and available in all languages, as internet access has become the entry point to e-commerce, entrepreneurship, educational and training programmes. internet access can enable digital literacy and help people to reskill or upskill throughout their lives. Here, the digital inclusion of marginalized groups is critical as it provides access to an untapped resource for economic growth and competitiveness. This also includes a digital public goods platform, which would serve as a place to pool data sets. For example, data can help governments, organizations and civil society better prepare for – and better deal with the aftermath of – climate disasters. It can support a city to better plan its transport networks, and aid public service authorities in providing universal and affordable health care, as well as in addressing persistent inequalities. Such a platform, that could involve the UN, would benefit developing economies in particular, which tend to have less data available to them.

2. Develop Human and Institutional Capacity

"[2] We recommend the establishment of regional and global digital help desks to help governments, civil society and the private sector to understand digital issues and develop capacity to steer cooperation related to social and economic impacts of digital technologies."

As outlined in the High Level Panel's report, digital cooperation should be grounded in common human values, such as inclusiveness, respect, transparency and sustainability, as well as in human rights and international law.[17] It is also understood that some of the key challenges facing regulators, consumers, and the private sector alike is the lack of simple entry points to digital cooperation support and related sources of knowledge, as well as insufficient understanding of digital technologies and their implications. In this context, the concept of "digital help desks" or robust capacity-building mechanisms and institutions can be a good entry point to provide support, such as with addressing the digital divide, with governance challenges, with leveraging opportunities, and engaging talent and investing in infrastructures.

The digital help desks could also collect and share best practices, monitor trends, and provide data on digital policy. Already governments and regional organisations have made calls to set up such capacity-building institutions, which could include support in the development of digital policy for capacity building, and viable approaches to invest in ICT infrastructure. One way to achieve this recommendation would be by building on the many existing digital help initiatives at national, regional and international levels, and to identify where gaps and challenges exist in capacity building and digital policy support.

3. Protect Human Rights and Human Agency

"[3A] Given that human rights apply fully in the digital world, we urge the UN Secretary-General to institute an agencies-wide review of how existing international human rights accords and standards apply to new and emerging digital technologies."

Firstly, given that human rights apply fully in the digital world, the High Level Panel called for an agencies-wide review of how existing international accords and standards are applied to new and emerging digital technologies. They also called on social media companies to work with governments, civil society organisations and human rights experts around the world to fully understand and respond to concerns about existing or potential human rights violations. And finally, they proposed that autonomous intelligence systems should be designed in a way that does not perpetuate in-built biases, and that maintains human accountability. In particular, life and death decisions should not be delegated to machines. The UN Secretary-General himself has called for a ban on lethal autonomous weapon systems.

For example, agreed standards and principles of transparency and anti-discrimination on emerging technologies should be developed. Universal principles on Artificial Intelligence, for instance, could address concerns that decision-making systems supported by AI may include discriminatory biases, such as skin cancer detection algorithms being less effective on dark skinned individuals, or exclusion of accents/languages from speech recognition tools.

> ## Digital security and stability are critical to ensuring human well-being and securing sustainable development gains.
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4. Promote Digital Trust, Security and Stability

"[4] We recommend the development of a Global Commitment on Digital Trust and Security to shape a shared vision, identify attributes of digital stability, elucidate and strengthen the implementation of norms for responsible uses of technology, and propose priorities for action."

This is especially important as the digital environment merges with the physical world. In this new era, how do we enshrine our shared values, principles, and understanding? How can we prevent trust and stability from being eroded by the irresponsible use of cyber capabilities? Digital security and stability are critical to ensuring human well-being and securing sustainable development gains. The call for some form of universal commitment to promoting digital trust at the global level, building on the many but scattered initiatives in this space, is thus timely. Moreover, to be effective and well-received, such an effort must be multi-stakeholder in nature, committing not just governments, but also other key players like technology companies and civil society to this collective endeavour. The Panel thus suggested that such a commitment to digital trust could strengthen the implementation of agreed norms, help develop societal capacity for cybersecurity, heighten resilience against misinformation, and encourage companies to strengthen authentication practices and to be more transparent.

5. Global Digital Cooperation

"[5A] We recommend that, the UN Secretary General facilitate an agile and open consultation process to develop updated mechanisms for global digital cooperation [...and] marking the UN's 75th anniversary in 2020 with a "Global Commitment for Digital Cooperation" to enshrine shared values, principles, understandings and objectives for an improved global digital cooperation architecture."

In follow-up to the report, the Secretary-General has requested that the High Level Panel's recommendations be discussed in earnest with Member States and interested stakeholders. As such, multiple experts, multi-stakeholder and cross-regional roundtable discussions, involving Member States, UN agencies, civil society, and other entities have been convened to discuss how to take the Panel's recommendations forward.[16] The expert roundtables will provide inputs and advice to be incorporated into a Roadmap on Digital Cooperation that the Secretary-General will present in Spring 2020.

In 2020, the world is celebrating the 75th anniversary of the United Nations. The story of the United Nations has been one of international cooperation across governments, private sectors, NGOs, and international organizations. Today, as a global community, we are facing questions and challenges posed by digital technologies to security, equity, and human rights, but international cooperation on these technologies remains very much in its infancy. Moreover, due to the resurgence of geopolitics and great power rivalry, multilateralism is under fire precisely when we need it most. As part of UN75, the United Nations has resolved to use this opportunity to reach out, to listen, and learn through the biggest-ever global conversation on "The Future We Want". It behooves us to address technology and digital cooperation as a critical part of this conversation.

Drawing on the recommendations of the High Level Panel on Digital Cooperation, the Secretary-General made three proposals at the 2019 Internet Governance Forum (IGF), which took place from 25 to 29 November in Berlin:[17]

His first proposal was to strengthen the IGF into an institution that comes closer to living up to its name. It was created as an outcome of the World Summit on the Information Society (WSIS), which was the most wide-ranging, comprehensive and inclusive debate ever held on the future of the information society. Back in November 2005, at the second phase of the WSIS, the IGF was created as a starting point so as to pave the way for international discussion to foster the sustainability, robustness, security, stability, and development of the internet. In 2020, the IGF needs actionable outcomes and it needs increased inclusion of young people,

← Cracking the code: In this new era, how do we enshrine our shared values, principles, and understandings?
Source: © Maxim Shemetov, Reuters.

women, parliamentarians, entrepreneurs, and under-represented countries.

Second, he highlighted the specific recommendation of the High Level Panel on Digital Cooperation regarding the possibility of a global commitment on Digital Trust and Security, by inviting all governments, industries, and institutions worldwide to consider this issue. Such a commitment should build upon agreed global norms for cyberspace and the pioneering work done by the Paris Call and the Christchurch Call, so as to bring the world together to agree on a vision for the 21st century that includes a more equitable, more accessible, and shared digital future.

The UN works towards enabling international cooperation to nurture a shared digital future that puts people first.
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Lastly, the Secretary-General announced his intention to appoint a Technology Envoy to work with governments, industry, and civil society, and advance collective efforts to nurture a shared digital future that puts people first. This will be critical if the United Nations is to optimize the use of digital technologies while mitigating their risks and harms. Once we ensure that everyone is connected, we will see extraordinary progress delivered towards each and every one of the Sustainable Development Goals (SDGs) through digital technologies.

Enhancing Digital Cooperation towards Sustainable Development

In today's complex digital world, digital technologies, which will play an increasing role in sustainable development over the coming years, can bring about tremendous benefits in areas such as education and healthcare, as well as commerce, food security, energy efficiency, and

e-government. Unfortunately, risks and challenges also come attached to the rapid development of digital technologies, in areas such as security, trust, privacy, human rights, electric waste, and carbon emission through to technical issues, such as interoperability.

These challenges can no longer be addressed by any single organisation or nation. Instead, finding the answer to these challenges depends on our ability to work together across disciplines and stakeholder groups, across nations and any type of divide. In 2020, during the 75th Anniversary of the United Nations, this process and indeed, our human story, will reach a critical juncture. An African proverb says, "If you want to go quickly, go alone. If you want to go far, go together". In looking to our digital future, the UN is seeking to enhance digital cooperation globally so that we can work together to fully leverage the benefits of technology, while curtailing its unintended consequences. This vision can only be implemented through global collaboration, engaging all the players in the ICT ecosystem, including governments, the private sector, academia, NGOs, and international organizations. If we are to truly build a future we want, we must come together to ensure that technology is used as a force for good, and for all.

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